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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHEW, JOHN

ART UNIT

PAPER NUMBER

2664

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <span style="float: right;">UK</span> 09/746,467	Applicant(s) HYAMS ET AL.	
	Examiner John L. Shew	Art Unit 2664	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Thornton et al.

Claim 1, Thornton teaches an apparatus comprising a private branch exchange (PBX) switch (FIG. 1, column 1 lines 7-22) referenced by the PBX 14, a residential gateway to receive channel associated signals (CAS) from the PBX switch (FIG. 2, column 12 lines 42-60) referenced by the T1/E1 Transceiver/Framer 270 connecting to the PBX using CAS signaling, a programmable CAS module to convert the CAS signals into signals of another telephony protocol (FIG. 5, column 25 lines 5-11, column 27 lines 31-41, column 28 lines 25-46) referenced by the T1AB software module 575 handling CAS AB

bits interaction with the Call Handler 560 for conversion to H.323 protocol module 563 for Voice Over IP.

Claim 2, Thornton teaches the programmable CAS module further comprises a programmable local call agent finite state machine to interpret events and to output user defined responses (FIG. 5, FIG. 8, FIG. 10, column 37 lines 31-40) referenced by the CAS Manager software module 830 of the Call Handler software module 560 which interfaces through a Peer Border Element Manager 960 State Machine to interpret events E with defined response actions A.

Claim 3, Thornton teaches a user interface tool to enable a user to create a CAS program file (FIG. 5, column 25 lines 12-35) referenced by the Web Server user interface 514 capable of software update and testing of T1/E1 framing.

Claim 4, Thornton teaches the CAS program file includes a system section (FIG. 8) referenced by the Call Handler Manager 850, an incoming signals section (FIG. 8) referenced by the CAS Manager 830, an outgoing signals section (FIG. 8) referenced by H.323 Manager 820 and a state events action section (FIG. 10) referenced by the Peer Border Element Manager 960 with Events and Actions.

Claims 7, 12, Thornton teaches a method and apparatus comprising allowing a user to define a state, an event or an action of a telephony protocol (FIG.1, FIG. 10, column 22

lines 33-41) referenced by the user interface to set system configuration parameters and invoking internal test procedures such as the Peer Border Element Manager State Machine comprising of events and actions towards establishing VoIP connection, downloading the user defined state event or action to a channel associated signal (CAS) engine (column 22 lines 33-41) referenced by the user interface downloading of internal operational statistics and software modules wherein the software modules being generic includes the CAS Manager, and changing a telephony protocol of the CAS engine corresponding to idle telephone lines associated with the CAS engine based on the user defined state event or action (FIG. 5, column 23 lines 41-51, FIG. 10, column 25 lines 5-35, column 27 lines 31-52) referenced by the user interface via a command test library update of the software with execution of the tests for T1/E1 framing which is essential to CAS signaling with the Peer Border Element Manager operating from the initial Idle state.

Claims 8, 13, Thornton teaches the telephony protocol is a CAS protocol (column 27 lines 22-52) referenced by the T1/E1 links used for CAS signaling.

Claims 9, 14, Thornton teaches the state is a transient condition of the CAS engine (FIG. 10) referenced by the Peer Border Element Manager 960 State Machine which is associated to the CAS Manager to establish a VoIP call wherein the states are all transient.

Claims 10, 15, Thornton teaches the event is an external trigger received by the CAS engine (FIG. 10) referenced by the State 1045 which requires an external Event of a TCP failure being a trigger.

Claims 11, 16, Thornton teaches the action is a response by the CAS engine to a state-event condition (FIG. 10) referenced by State 1045 which has an action response of Start Retry Timer.

Claim 17, Thornton teaches a computer readable medium having instructions embodied thereon (FIG. 2, column 15 lines 23-34) referenced by 4Mx16 Flash memory module 205 containing program code, which when executed by a processing system (FIG. 2) referenced by Micro Controller 240, causes the system to perform a method comprising allowing a user to define a state, an event or an action of a telephony protocol (FIG.1, FIG. 10, column 22 lines 33-41) referenced by the user interface to set system configuration parameters and invoking internal test procedures such as the Peer Border Element Manager State Machine comprising of events and actions towards establishing VoIP connection, downloading the user defined state event or action to a channel associated signal (CAS) engine (column 22 lines 33-41) referenced by the user interface downloading of internal operational statistics and software modules wherein the software modules being generic includes the CAS Manager, and changing a telephony protocol of the CAS engine corresponding to idle telephone lines associated with the CAS engine based on the user defined state event or action (FIG. 5, FIG. 10,

column 25 lines 12-35) referenced by the user interface via a command test library update of the software with execution of the tests for T1/E1 framing which is essential to CAS signaling with the Peer Border Element Manager operating from the initial Idle state.

Claim 18, Thornton teaches the telephony protocol is a CAS protocol (column 27 lines 22-52) referenced by the T1/E1 links used for CAS signaling.

Claim 19, Thornton teaches the state is a transient condition of the CAS engine (FIG. 10) referenced by the Peer Border Element Manager 960 State Machine which is associated to the CAS Manager to establish a VoIP call wherein the states are all transient.

Claim 20, Thornton teaches the event is an external trigger received by the CAS engine (FIG. 10) referenced by the State 1045 which requires an external Event of a TCP failure being a trigger.

Claim 21, Thornton teaches the action is a response by the CAS engine to a state-event condition (FIG. 10) referenced by State 1045 which has an action response of Start Retry Timer.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton as applied to claims 1-4 above, in view of Cartwright Jr.

Claim 5, Thornton teaches a Voice Over IP telephony gateway apparatus comprising of numerous software modules including a CAS manager with a web server user interface for updating software. He does not teach a compiler to generate binary CAS file.

Cartwright Jr. teaches a compiler to generate a binary file from a program file (FIG. 1, Abstract lines 1-10) referenced by the computer system 34 to compile a source program into machine code.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the program compiler of Cartwright to the VoIP gateway Web Server interface of Thornton for the purpose of generating virtual machine code executable on different machines.



Claim 6, Thornton teaches the binary file is downloaded to a module (column 22 lines 32-41, column 25 lines 25-35) referenced by the software update with downloading capability. Since software is generic, this includes all software modules such as the CAS manager as well as DSP drivers.

### ***Response to Arguments***

Applicant's argument over rejection of claim 1 has been fully considered but they are not persuasive. The examiner respectfully traverse the arguments presented.

Regarding the argument traversing the rejection of Claim 1 that T1AB is not a "software module" but rather a "process" as noted by the Key on Figure 5, the examiner defers to the definition of a "process" as defined by Newton's Telecom Dictionary. Newton's Telecom Dictionary presents the definition of a process as:

**"Process** A software application. Any activity or systematic sequence of operations that produces a specified result. Typically, a computer function that consists of, or involves, procedure code, data storage and an interface for communicating with other processes."

The definition clearly defines a process as a software application. As such the T1AB process is composed of software within the Call Processing Software 500.

Thornton discloses Figure 5 as a Call Processing Software 500. This is further identified as an Application Program in Figure 3 within the Gateway Software. The examiner maintains that as a program, it can be modified and is therefore programmable.

Thornton clearly states this in col. 25 lines 5-11 which cites:

“As noted above, software updates, such as to a driver or process, can be provided, via user entered telnet commands, through FTP process 529 to the system. Any such update, in the form of replacement code, is written, through use of flash programming module 523, into flash memory 205 (see FIG. 2) and, as such, overwrites a corresponding prior version of the code.”

Since the T1AB “process” is a software application and Thornton discloses software updates to a process, it is clear that the T1AB process is programmable. Thornton does not disclose the replacement of a whole module after its initial construct, only updates which is in the form of replacement code.

Applicant's argument over rejection of claim 7 has been fully considered but they are not persuasive. The examiner respectfully traverse the arguments presented.

Regarding the limitation "changing a telephony protocol of the CAS engine", the CAS engine is shown through Figure 5 by the T1AB process which uses A B bits of Call Associated Signaling. This is explicitly disclosed by Thornton in column 27 lines 33-37 cited as:

"T1AB process 575 interacts, through AB bit driver 591, with individual signaling bits A, B provided in CAS and converts the signaling information contained in these bits into a representation usable by the call handler."

Further, Thornton discloses software updates of a process as disclosed in col. 25 lines 5-7:

"As noted above, software updates, such as to a driver or process, can be provided, via user entered telnet commands, through FTP process 529 to the system."

Finally Thornton teaches a user interface via a command and test library for software updates as disclosed in column 25 lines 25-31:

"A user interface is provided, via command and manufacturing test library 575, through which, as discussed above, the user can interact with the gateway, and, e.g., update software through FTP process 529, download log entries, execute various manufacturing tests (such as T1/E1 framing, loopback, LED tests and others), and so forth."

It is clear Thornton discloses an interface to change processes and drivers through software updates including the T1AB process 575 and AB Bit Driver 591.

The limitation of "CAS engine corresponding to idle telephone lines associated with the CAS engine" is referenced in Figure 10 by the Peer Border Element Manager 960 which operates from the initial idle state 1010 along with a series of defined states. This is the initial state to which the CAS engine must match at the initial start of the call and thus is associated to the CAS engine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L. Shew whose telephone number is 571-272-3137. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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**Ajit Patel**  
**Primary Examiner**